

AMERICAN VETERINARY REVIEW,

FEBRUARY, 1886.

EDITORIAL.

HENRY BOULEY.

While our December number was in the hands of the binder, the veterinary world was surprised and saddened by the sorrowful news of the death of Mr. Henry Bouley. Among those who loved and admired him we felt it to be our duty to be the first to announce the sorrowful event to our brethren on this side of the Atlantic, reserving to ourselves for a later period the task of entering upon a narrative of the life and labors of the great veterinarian, whose place in the ranks of his profession it will be, for years to come, so hard to fill.

Henry Bouley was born in Paris in 1814, and died on the 29th of November, 1885, after a protracted illness and much suffering. His career, from his entrance into the veterinary profession, has been one of distinction and eminence. Professor at the Veterinary School of Alfort, where for twenty years he was not only the teacher but the friend of many students, he became successively Inspector General of the Veterinary Schools of France, Member of the Academy of Medicine, Commander of the Legion of Honor, Professor of Comparative Pathology at the Museum of Natural History, and last, but not least, President of the Academy of Sciences, a position in the profession of medicine never before obtained by any veterinarian.

But of all his titles, that which it gave him the greatest

pleasure to hear was the designation of "the Boss" (*le Patron*), applied to him by those who attended his instructions.

But above all other things, Henry Bouley was a VETERINARIAN, and no man was ever more proud of any title than he of this. Veterinarian he was, nor would he consent to be anything else; and it is the judgment of the profession, referring to the achievements of Pasteur, that the work of that discoverer has, with Bouley's aid, produced effects in fifty years which would have required a century to accomplish without his co-operation.

A detailed account of the immense amount of instruction for which the profession are indebted to his writings would be an impossibility, and the *Recueil de Medecine Veterinaire*, of which he was the Director for fifty years, is a magazine of knowledge to which veterinarians of all ages will never cease to refer for instruction in their calling, and his *Chroniques* were an open tribune from which he announced all scientific discoveries to the world, whether made in the domain of veterinary science, or in the wider field of comparative medicine.

His book on "The Horse's Foot," his articles on "Glanders and Farcy," and on "Rabies," in the *Dictionnaire des Sciences Medicales*, the numerous articles contributed by him to the *Nouveau Dictionnaire Pratique de Medicine, Chirurgie and Hygiène Veterinaires*, numerous pamphlets on all subjects—these alone are sufficiently numerous to form the library of an ordinary veterinarian or medical man.

In his later years he published "Le Progres en Medecine par l'Experimentation," his lectures before the Museum of Natural History, and "La Nature Vivante de la Contagion," the last of which contains the expression of his faith and confidence in the scientific discoveries of Mr. Pasteur, of whom he had become the admirer, the great supporter and the strongest champion; and it was largely through his lectures, and his powerful and elaborate methods of elucidation and discussion, that the veterinary profession and the medical world soon became convinced of the truth of the noble results achieved and claimed by the great French chemist.

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wonderful writer, and an eloquent orator; and the place he occupied among the savants of France was but rightly and fairly his due.

But these are not the only grounds of our earnest regrets at his loss. His personal influence, his kindness of heart, his friendly bearing towards all men, had gained for him the affection and esteem of all who knew him. He could not make, or have, an enemy, and he had none. We, for our own part, who have been numbered with his students, and to whom he always accorded the most cordial treatment whenever, during our visits in Paris, we visited him at his home, can never forget how kindly he questioned us as to our progress in America; how solicitous he appeared, and felt, to know of the standing of our profession; and how sympathetically he tendered us his excellent counsel in respect to the labor which he knew we had chosen for our life's work.

Our latest parting, in August last, was most friendly, and we shall never forget his sad but kind smile when, in answer to our inquiry if he would come to America to assist in the International Medical Congress, he bodingly said, "No, my friend; my health will not permit it."

The funeral rites attending the burial of Mr. Henry Bouley were worthy of this great man. The students of the school at Alfort led the cortege, and were followed by delegations of the Professors from Lyons and Toulon, and after these appeared a long procession of other veterinarians. Many of the veterinary societies and other scientific bodies to which he had belonged had also appointed delegates, to give expression by their presence of their sense of an almost national calamity, and at the tomb speeches were made by representatives of the Institute of France, of the Museum of Natural History, of the Committee on Hygiene, of the Academy of Medicine, of the Veterinary Schools of France, of the Society of Acclimatation, of the Military Veterinarians, of the Society of Biology, of the Agricultural Society, of the Veterinary Societies of France, and of the Societe Centrale Veterinaire, which by his death has lost the last of its founders.

As it was impossible for us to attend the funeral from this remote distance, personally, it gives us a melancholy satisfaction to tender in this form an expression of our profound sympathy with the sorrow of his bereaved family and near associates; and we have no doubt that there are those in this land who will unite with us in such an offering of appreciative condolence.

VETERINARY LEGISLATION.

We have before, in our January number, referred to this subject, and we find occasion again to bring it before the attention of our readers. We have published the excellent paper of Dr. Finlay, and noticed the action of the society before whom it was read, and to-day we print a copy of a bill which has been prepared for presentation at Albany, together with a communication from Dr. Pendey on the subject.

We are informed that already another bill has been introduced in the Legislature, and are pleased to be able at a late hour to publish it.

Which of the bills will receive the support of the New York veterinarians it is not easy to say. The practitioners of the city of New York are well united in favor of that of the State Society, and are bound to defend and promote it by all possible means; and their success seems to be so certain that doubts appear out of the question as to the result, unless, as said one person very active in the movement, "there is a black sheep amongst us."

THE FUTURE OF THE VETERINARIAN.

We will not venture to say how many letters we have received, or in how many colloquies we have engaged, during our connection with the subject of veterinary education, in which the burden of inquiry has been the remunerative quality of the practice of the veterinary profession. "Does it pay?" "Can a veterinarian support his family?" etc.

These are, of course, practical and experimental questions, and are quite appropriate at the present time, and indeed, may continue to be quite as pertinent for years yet to come. The

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veterinarian of to-day is a wonder of scientific knowledge, when compared with one of twenty-five years back, and possibly the man of fifty years hence will regard the practitioners of our times very much as we esteem our predecessors. But with all the deficiencies with which the veterinarian of to-day may be charged, a glance at the results obtained in practice in a pecuniary and honorary point of view may be fairly illustrated by the positions held by many of the alumni of our schools.

Perhaps amongst the prospective results which may be realized by the young veterinarians, there is none more effective than the fact that official appointments have now become obtainable by our regular graduates, and that these positions are capable of being made so essentially useful and beneficial to the public that salaries connected with the appointments are quite likely to be made of sufficient importance to encourage and reward any successful incumbent, if truly competent. This is fully proved by the results obtained by some of our State and Territorial Veterinarians who are now occupying these positions and receiving salaries varying from \$2,500 to \$5,000. The Territorial Veterinarian of Wyoming, Dr. J. D. Hopkins, who has now occupied the position for, we believe, a period of four years, has just received the appointment to a third term of office, at a salary of \$5,000. We sincerely compliment our friend upon his reappointment, but, above all, congratulate him for his success in making his profession so well appreciated that now the vast interests of the cattle-growing regions can no longer be separated from the care and watch of the veterinary practitioner, and not only, nor so much perhaps, as a practitioner of medicine, as a sanitarian.

Who will be the next to ask if the veterinary profession pays?

VETERINARY EDUCATION.

We have so often called the attention of our readers to this subject that it almost seems superfluous to present it again to their minds. But, after all, how great is its importance! Who shall say a depreciating word in the matter? We received a letter on the subject which we published some time ago, and to-day

we print another. A careful perusal of this one will not fail to show the necessity of certain changes. Yes, the modes of education are deficient in almost all our veterinary schools; are incomplete in some, and quite worthless in others. If we are ever to expect the recognition on this side of the Atlantic which is granted to veterinarians in the Old World, it is most urgently necessary that veterinary education should be differently regulated. It is time that those who intend to enter our ranks should feel that they become members of a profession than which none is more honorable and respectable. The question has been well enough agitated, still it has scarcely received adequate notice from veterinarians. The letter we publish to-day will, we hope, stimulate the enthusiasm of a few who will let us hear from them on this professional question.

ORIGINAL ARTICLES.

DISEASES OF THE HEART IN DOMESTIC ANIMALS, ESPECIALLY THE HORSE.

BY FR. BLAZEKOVIC.

(Translated by J. C. Meyer, Sr., V.S.)

Continued from page 414.

I.—PLASTIC EXUDATION

Is that previously mentioned form of exudation which adheres to the surface of the pericardium. In a mild degree of inflammation it forms a slight, scarcely perceptible deposit, which adheres to the free surface as a soft, easily torn, glutinous coagulation. Immediately after exudation, the fibrine coagulates and forms irregular, cord-like elastic coagulum. Its quantity is often very insignificant, merely representing a slight turbidity; still it may sometimes amount to several hundred grammes; its color is from pale yellow to pale green. Upon exudation of a large quantity of liquid plasma the pure fibrine changes into small granulations and can become reabsorbed after the inflammation has ceased.

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That which does not reabsorb is organized into a secondary form of exudation as purulent, tuberculous, and secondary hemorrhagic exudation. Soon after the fibrinous exudation organizes, distinct cells are to be found, which adhere to one another and form the plastic exudation. Such fibres accumulate in various quantities and form pseudo-membranes and swardy exudation on the heart and peritonieal membrane.

In such case, the pericardium is always thickened, turbid and tender, covered in spots with rugged, wart-like, navicular secondary excrescences of cellular tissue. These cause chord-like, resembling thick snow-flakes, or rugged, partial protuberances projecting into the cavity of the pericardium. Such swardy coverings are traversed with vessels which generally have an extended course. According to their calibre these vessels arise above the capillary veins. After the resorption of the liquid exudation, the above mentioned snow-flake-like formations remain in greater or less dimension.

In fibrous exudation a calcification or cretification takes place after a deposit of chloride of lime, which is erroneously regarded as ossification, no trace of bony cells being found here.

II.—ALBUMINOUS EXUDATION.

This is often and mostly an attendant of fibrinous exudation, though sometimes it occurs independently. It consists chiefly of albumen and serum of a gelatinous, often oily consistence, of a uniform yellow color and very glossy. Its quantity varies from a few to hundreds of grammes. The albuminous exudation has not the organizable quality of the fibrinous. Cells are also formed in it, but upon their appearance the whole mass assumes a purulent aspect. It rarely maintains organizable power, and if it be not previously resolved, it changes to a sanguous and purulent substance.

III.—SEROUS EXUDATION.

Serous exudation is an accumulation of serum in the cavity of the pericardium, and is only then to be regarded as proceeding from pericarditis, when it takes place at the same time with fibrinous products. Serous exudation is very rarely found in the

pericardium alone, but the same effusions are present in the other parts of the body (as an indication of local or general dropsy). The serous exudation is transparent, thin liquid, light yellow—yellow-green, and not viscid. Fibrinous flakes float therein, which, however, accumulate very rapidly and form a covering over the pericardium. The serous effusion is apt to yield to purulent decomposition; still it can be easily resolved if no dense sward exudation cover the pericardium. According to the increase of the quantity, the exudation fills the pericardium partially, or wholly, and thereby determines the more or less alarming symptoms of disease during life. The pericardium expands according to the increasing quantity. The heart, as a specific heavier body, takes a deeper position, hence, with every pulse beat, a wave-like motion must arise in the liquid.

IV.—HEMORRHAGIC EXUDATION.

This consists of a quantity of serum, albumen, slightly coagulated fibrine, and an admixture of pigment. It is sometimes clear, brownish-red, or brownish-black, and of a primary or secondary nature. Its quantity varies, and with the exception of the change in color, it seldom succumbs to metamorphosis.

V.—PURULENT EXUDATION.

Purulent exudation is a secondary form, and can develop from any exudation which will admit of a change into pus cells. Generally it is an additional consequence of the development of fibrous exudation. The color is greyish-green, or greenish-yellow; the consistency cream-like, often thin liquid. The mass is always lodged between the organized fibrous tissue, so that pus, fibrous exudates, tissue and serum can be met with at the same time. Purulent exudation in the pericardium will only then become resorbed when the quantity is not too great; still the purulent liquid only resorbs, the pus cells become thickened (because they cannot pass through the walls) which thus absolved are less injurious. Under unfavorable circumstances the purulent exudation becomes sanious.

VI.—SANIOUS EXUDATION.

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which contains but very little fibrous material and always indicates a great diminution of vital power. If sanguis has once set in, resorption is impossible. The change goes through the whole effused mass, and all formations with which they come in contact are affected by it.

VII.—TUBERCULOUS EXUDATION.

Tuberculous exudation occurs only then in pericardium, when the existing effusions become more fully developed, and tubercles are already present in the lungs and other organs, and the organism is predisposed to the development of tubercles in such a degree that everything turns toward tuberculous metamorphose. The result has been exhaustively described in another place. Just so much need be mentioned here, that where a tuberculous metamorphose took place, other exudations united with the tuberculous also occur.

VIII.—CANCEROUS EXUDATION.

This is also a change of the plastic albuminous exudations into cancerous cells in the pericardium, which appear in the form of a medullary tumor, in the shape of small knots upon the outer and inner surface of the pericardium. The cancerous mass itself and the existing serum are generally colored by a secondary hemorrhagic effusion.

IX.—DROPSY OF THE PERICARDIUM.

Dropsy of the pericardium is the accumulation of serous fluid without intermixed fibrine. This can take place in consequence of pericarditis, also without previous inflammation. A light yellow, yellowish-green, transparent, perfectly clear serum is found in various qualities. Sometimes it is also thin liquid, of a dirty brown or brownish-red color, often having a disagreeable odor. The muscular substance of the heart is at the same time tender, pale, easily torn and discolored. Dropsy of the pericardium occurs mostly in attendance with general dropsy.

X.—HEMORRHAGE IN THE PERICARDIUM

Occurs in consequence of rupture of the vessels, generally after traumatic influences. However, spontaneous hemorrhage can also take place if very important disturbances in the circulation,

overfilling and bursting of the vessels give cause thereto. Slight hemorrhages can pass over without leaving any trace, but greater ones can cause important disturbances. By the rupture of greater vessels death can occur instantly, not from a lack of blood, but by overfilling of the pericardium and preventing the heart's functions.

(E) INFLAMMATION OF THE FLESHY SUBSTANCE OF THE HEART.

Myocarditis.—An inflammation of the fleshy substance of the heart is generated by traumatic influences, foreign bodies, and the like. That part of the foreign body which penetrated the muscle of the heart and is not hidden in the fleshy substance, is as a general thing encased within a solid fibroid capsule. The point surrounded by fibrine projects entirely into the cavity of the heart; on the rugged edges, bloody, dark, fibrinous coagulations, sinewy solid white callosities are found, which in part penetrate the pericardium in form of ramified fibrous masses and partly take the place of the fleshy substance of the heart in various expansions. They occur mostly in the left ventricle toward the apex, and if they be extended, give cause to aneurism of the heart.

The muscular fibres are found in the different stages of softening and fatty degeneration. Small abscesses in portions of the softened and relaxed muscle of the heart are not rare, as also in pyæmic animals abscesses are found in the fleshy substance of the heart. The condition described here is also the same in myocarditis not of traumatic origin, and is congruent with this.

(F) INFLAMMATION OF THE INNER LINING OF THE HEART.

Endocarditis.—The anatomical changes and conditions show the following features:

Seldom diagnosticated during life, endocarditis in horses is occasionally found as a complication with other diseases, such as inflammation of the lungs, pleurisy, peritonitis and acute constitutional ailments, also after large doses of digitalis. It attacks different portions of the interior lining of the heart; now the lining of the cavity partially; now the valves of the heart, or both simultaneously. However, the seat of the endocarditis is not

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Quite frequently the tissue of the heart becomes coagulated, shrivelled, shrivelled, particularly on the valves, and metamorphosed into a

alone in the endocardium, but it extends to the adjacent cellular substance. The present exudation affects not only the upper layer of the pericardium, but penetrates through its permeable texture.

Endocarditis is manifest in the following manner:

1. Hyperemic, injection and sanguinous hue are to be found in the first stages of the disease, and if death follows suddenly, it is apparent on the valves and endocardium. In most cases this sanguineness becomes unrecognizable, due to the turbidity which soon ensues.

2. Turbidity and darkening of the endocardium, which is non-transparent and cloudy in different places, and appears unevenly tumefied. These turbid and thickened places are caused by the deposit of the inflammation product in the endocardium, and are not bordered nor circumscribed, but disappear in the surface of the tissues. At such places the endocardium loses its smoothness and gloss; it becomes pale, rough and felt-like. The deposit of exudation is often so important, that it softens the whole inner lining of the heart. Its texture is then easily torn and the true endocardium easily detached. Such loosening of the fibrous tissue of the valves occurs in inflammation of the valves; lacerations of the relaxed valve tissues are then frequent.

In endocarditis the exudation is important, no matter if the inflammation affects the lining of the heart or valves.

As soon as the epithelium is pushed off, the surface becomes wrinkled and loses its cohesiveness; then it generally appears covered with fine warty, lamellar like layers of fibrine, in consequence of which calcification is apt to take place. If such coagulations be carried with the blood and accumulate in the liver, spleen or kidneys, they give rise to metastatic abscesses.

Quite frequently protuberances from the layers of cellular tissue of the inner membrane are to be found beneath the fibrinous coagulations which appear in form of small warts, but can eventually shrivel up. Thickening and chalky concretions, particularly on the valves, are conditions which indicate the final metamorphose of the exudation. Transformation of the exudation into pus is a rare event, still it can be met with as infiltrated

purulent product, generally mixed with blood. These products give cause to ulcerous changes in the lining of the heart, and are always characterized by an obnoxious odor, discoloration, insignificant consistence, and a disposition to suppurating decay.

The result is, permanent solidification of the endocardium, whose significance corresponds to the magnitude of the inflammation and recurrence at the same place. On the one hand it is conditioned by the filtered products in the tissues, and on the other by the effused and stiffened exudation upon the free surface. Such conditions are found chiefly on the valves.

(To be continued.)

PHYSIOLOGY.

INFLUENCE OF THE SUN UPON THE VEGETATION, VEGETABILITY AND VIRULENCY OF THE CULTURES OF BACILLUS ANTHRACIS.

BY M. S. ARLOING.

In a former communication* we have shown that the solar radiations of July are capable of destroying, in two hours, the vegetability of the spores of the bacillus anthracis, when recently placed in a liquid nutritive culture. The effects of the sun are, however, far from being as rapid upon cultures already in process of growth. What these effects are, successively, upon the vegetation, the vegetability and the virulence of these cultures, will form the subject of the present discussion.

First.—If spores of the bacillus anthracis are made to germinate in a dark oven, at a fructifying temperature, and afterwards, within from 24 to 48 hours, the cultures are removed into a transparent oven admitting the sun during the day, and in an ice-chamber during the night, it will be observed that the vegetation of the bacilli is not entirely arrested by the action of the solar rays. When coming out of the dark oven, the culture contains mycelium, and forms spores; where the mycelium already con-

* See October issue.

tains spores, their number increases, their threads break up, some of them become free—in a word, the culture continues its evolution. This, however, proceeds more slowly, and in the same manner as when placed in media of less favorable nutritive quality. And in that case, the fragments of the bacilli often collect together in irregular masses, in which the spores form themselves, as in a kind of zooglia.

Second.—As to the vegetability of the mycelium more or less sporulated, the development of which has taken place in the dark chamber, it is destroyed only after 29 or 30 hours of exposure to a July sun, by a temperature varying between $+30^{\circ}$ and $+36^{\circ}$. It is understood that the vegetability diminishes by degrees, before it disappears entirely. If, after four, eight, fifteen or twenty hours of exposure to the sun, a drop of culture is transferred into others, it will be observed that the cultures of the second generation become less and less cloudy, in proportion to the period of time during which they have been exposed to the sun. And besides this, the appearance of the growth will take place more slowly. In bouillons at the temperature of our oven, a normal cultivation will present indications of growth after 10 or 12 hours; while another, exposed to the sun for from four to eight hours, will give no evident signs of vegetation before 20 or 24 hours; and if the culture had been exposed to the sun for 15 to 20 hours before, 36 or 40 hours will be required. It is worthy of remark that cultures which proceed from another already exposed to the sun are less resistant to insolation than those which come from a normal culture. For example, it is sufficient to expose to the sun, for nine or ten hours, a culture whose origin has been similarly exposed for 25 hours, to completely destroy its vegetability. A culture of the third generation, whose mother cultures have been so exposed, first for 17, and then for nine hours, has quite lost its power of fecundation after an insolation of 10 hours. If, however, an addition is made of the sums total of the hours of insolation, it is observed that the loss of vegetability takes place, in the average, after 27 hours. This well proves the clearness and gradation of the effects of insolation upon cultures of *bacillus anthracis*.

Third.—The modification of the vegetability of the cultures is associated with the attenuation of their virulence. If a culture is exposed to the sun, and if from this, at different times between the first and the 30th hour, a part of it is taken, sufficient to fecundate another culture, and to inoculate two guinea-pigs, a double series of interesting experiments may be started. While the cultures will become less and less cloudy, and the first marks of vegetation will be slower to show themselves, the guinea-pigs will first die with anthrax in the ordinary time, then at a later period, and at last will resist the inoculation. In the last case, the survivor will have obtained a certain immunity, varying in strength. It is towards the 30th hour of insulation that the cultures have become vaccinal.

Colored rays, which have little or no effect upon the vegetability or vegetation, have not produced an attenuation of the virulence. Cultures which have proceeded from spores that were exposed to the sun for a time not long enough to stop all vegetability, seem yet to possess a great virulence.

Fourth.—It is beyond doubt that sunlight can effect the attenuation of the virulence of cultures of bacillus anthracis, and transform them into a series of vaccines, as certainly as heat will. What remains to learn is whether the attenuation obtained by the sun's action is susceptible of preservation, nearly intact, and can be transmitted by generation. This will be the subject of further study. If the results were positive, one might judge of the ease and simplicity which would characterize the preparation of carbuncular vaccine during the summer. Whatever these may be, the facts at present known demonstrate that light is a biological agent of very great importance in the world of the infinitely minute.—*Acad. des Sciences.*

PASTEUR'S INOCULATIONS.—Pasteur has now treated seven Americans for the purpose of preventing hydrophobia. Of these it is not positively known that a single one of them was bitten by a rabid dog, unless it is Kaufman. The daily papers of the present week announce that the dog which bit him bit another dog, which latter has had signs of hydrophobia.—*Medical Record.*

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PATHOLOGICAL PHYSIOLOGY.

PROGRESS OF THE LESIONS FOLLOWING THE INOCULATION OF TUBERCULOSIS OF MAN TO THE RABBIT AND GUINEA-PIG. APPLICATION TO THE STUDY OF INOCULATION AND RE-INOCULATION OF TUBERCULOSIS.

By M. S. ARLOING.

First.—The progressive invasion of the lymphatic system by infectious substances which enter the economy by effraction; the inflammatory swelling of the glandular chaires, marking out, as it were, the road followed by the virus, are notions long since accepted in pathology. In late years, Colin and Toussaint have made special applications of these items of knowledge—the first to the mode of progression of the tuberculous virus, the second to the determination of the seat of infection of anthrax. Still, if the infection of the organism generally takes place in this manner, it would be wrong to believe that it also always proceeds in that manner in all domesticated animals.

Among the numerous inoculations which we have for some time been making in the study of the relations that may exist between huma : tuberculosis and scrofula, we have observed interesting differences between the propagation of the tuberculous process in the rabbit and in the guinea-pig, which are quite worthy of consideration.

Second.—Several authors have already remarked the excessive sensibility of the organism of the guinea-pig to tuberculous virus; but no one, we believe, has insisted upon the relative weak receptivity of the rabbit. If we study the facts in two groups of guinea-pigs and rabbits, simultaneously inoculating with proportional doses of virus, we shall discover that after two months all of the former will present numerous and extensive signs of general infection, while amongst the rabbits a portion of them will escape the effects of inoculation altogether, while others will have lesions less numerous than those of the guinea-pigs, and perhaps only a single pulmonary tubercle. Instead of becoming tuberculous by almost everything, as it has been stated, the rabbit offers a comparatively powerful resistance to the virus of human tuberculosis.

Third.—The most important difference rests upon the propagation of the infection. In the guinea-pig, the virus is propagated by the way of the lymphatics, with perfect regularity. If an animal is inoculated on the internal face of the thigh, the corresponding inguinal glands become enlarged and hard, from the 10th to the 15th day—seldom later; the sub-lumbar glands of the same size become tumefied, the spleen becomes tuberculous; then the retro-hepatic gland, then the lungs and the bronchial glands. The infection remains unilateral as far as the diaphragmatic region, then somewhat indefinitely spreads itself to the right and to the left. In two months the infection is complete. When the inoculation is made at the base of the ear, the virus progresses toward the chest, successively affecting the lymphatic glands located on its way. Consequently there is, so to speak, not one guinea-pig inoculated under the skin that does not present a glandular tuberculosis.

In the rabbit, on the contrary, complete glandular tuberculosis has never been observed after inoculation with human tuberculosis. The local lesions are often either absent, or they only consist in small spots of granulations, or a caseous abscess; the visceral lesions are pulmonary or pleural; but, between the inoculated thigh and these organs, there is not the slightest lymphatic swelling. In two cases, however, where the local alterations had been accompanied with large abscesses, we have observed hypertrophy of the glands; but inoculation proves this not to be specific.

To resume: In the rabbit there is visceral tuberculization without glandular lesions; in the guinea-pig there are unmistakable marks of the passage of the virus through the lymphatic system.

Fourth.—We have sought for the cause of this difference, querying whether it did not reside in the physical condition of the infecting matter. With this in view, we made subcutaneous injections with sifted and filtered virus, and inoculated with the lancette of coarsely-marked tuberculous masses. The number of tuberculizations was smaller in the second case, but in the propagation of the disease its mode was always the same. The differ-

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ence must therefore be attributed to specific organic characteristics of the animal species.

Fifth.—From these facts it results that the guinea-pig is better than the rabbit as a test of the tuberculous nature of a lesion. If the rabbit is used, it will be necessary to look carefully for the lesions, and to be satisfied with a limited number of visceral lesious changes.

And they also show that the problem of the re-inoculation of tuberculosis can be elucidated only upon the guinea-pig. Indeed, in any tuberculous inoculation affecting the lung directly, in the rabbit, it is impossible, in presence of pulmonary lesions, to decide whether these are due to the first or to the second inoculation. On the contrary, nothing is easier than to follow, in the guinea-pig, the positive effects of inoculation and re-inoculation. All that is necessary is to perform the first on the internal face of the thigh, then, when the tuberculous induration of the inguinal glands is well marked, to perform the second at the base of the ear. Thanks to the swelling of the pre-auricular and pre-scapular glands, it will be easy to know when the organism is under the effect of the second inoculation, which travels in an opposite direction, but towards the first. As evidence of the receptivity of tuberculosis, this experiment escapes all serious objection. It is superior to that which consists in merely reproducing a simple ulceration in the walls of which the bacillus of Koch is found, because in certain diseases, the inoculation of an active virus to subjects enjoying immunity may give rise to the formation of an abscess, at times ulcerous, whose pus and walls contain very virulent micro-organisms.—*Presse Veterinaire.*

AMERICAN VETERINARY COLLEGE—HOSPITAL DEPARTMENT.

Report of Cases by J. W. SCHEIBLER, D.V.S., House Surgeon.

CHRONIC NAVICULAR DISEASE—SUCCESSFUL NEUROTOMY— PYÆMIA—DEATH.

This is the case of a gray mare, seven years old, recently purchased by her present owner, Mr. M— of this city. She had been for some time a sufferer from lameness, the seat of which

had been located in the shoulder, by several veterinarians. But when she was trotted out, it seemed clear that the near fore leg was the point chiefly implicated in the trouble. Her action was groggy, and when at rest the foot pointed. The shoe was considerably worn at the toe; the pasterns were nearly upright, and the heels were contracted. The foot was somewhat warm, and in fact, all the symptoms of navicular disease were present. The operation of neurotomy was recommended, as affording the only chance of rendering her useful to her owner.

With his consent and agreement to accept all possible complications and accidents, the patient was prepared for the operation, and on the second day after her admission, she was thrown down and the operation performed, without the least accident, except the division of a small vein as the nerve was being amputated at its lower end, the division giving rise to a very slight hemorrhage. The operation being completed the animal was allowed to rise to her feet, and was trotted up and down, her lameness having entirely disappeared, and the result of the operation fully confirming the diagnosis. The wound was immediately sponged, dressed antiseptically, and a cold water bandage kept on the leg.

On the following day the stitches of the two incisions were removed and the leg dressed.

For nine days, or until the 30th inst., the case seemed to be progressing in the most favorable manner. The wounds remained dry, the edges continued united, and all the appearances seemed to indicate a union by the first intention. So satisfactory seemed to be the condition of the patient, in fact, that it was in contemplation to request her owner to remove her to his own stable. But on the 1st of December a swelling appeared in the fetlock, not large as to its dimensions, but warm and painful, and her gait became stiff and awkward. Warm fomentations and poultices were ordered during the day. On the second day the swelling had so increased as to reach to the knee, the temperature rising to 102° , and the pulse to 40, though her general functions were otherwise in good order.

December 7th, temperature, 101° ; pulse, 70; respiration, 16. The swelling was increasing, and had now extended to the elbow.

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The animal was placed under alcoholic stimulants every three hours, the swelling being fomented several times a day, after being scarified in several places.

December 8th, the same condition continued. Temperature, 102°; pulse, 39, respiration, 14. The whole leg had a very unhealthy appearance, with small gangrenous patches at intervals, the hair coming off around the patches.

December 10th, the swelling remained at a stand still. A few small abscesses, which had formed at various points on the inside of the leg and along the course of the lymphatics, were opened and dressed with carbolic solution, with internal treatment by the same. Poultices and fomentations were continued during the day.

On the following day a few more small abscesses were found and opened, and a hard, round swelling was felt in the axillary region. The movements of the animal were accomplished with great difficulty, and fearing her inability to rise again when lying down, she was placed in slings.

December 13th, the temperature had risen to 103°; the pulse remaining low, 39. Same treatment was continued.

December 14th, temperature, 103½°; pulse, 47. The abscesses were discharging freely. The animal having been removed from the slings, had laid down, but was unable to rise to her feet again. She was raised, and when standing seemed to have lost the use of her fore leg. The swelling of the axillary region had increased enormously, and pressure upon the bracial plexus was evidently the cause of her loss of power.

During the evening she became so restless in the slings that it was thought better to remove them, and in the morning she was found down, unable to get up, and in so critical a condition that she was destroyed.

At the post-mortem the leg was found to have been the seat of extensive purulent infiltrations, and the axilla that of an enormous abscess, containing several quarts of landable pus. The wounds of the operation were granulating and had almost entirely healed. An examination of the navicular bone revealed the presence of extensive ulceration of the fibro-cartilage of the posterior face, connected with a small cavity of the sesamoid bone.

Of all the complications likely to follow the simple operation of neurotomy, this is, we believe, one which, so far as we can discover, has hitherto not yet been recorded.

URETHRAL CALCULUS IN THE CAMEL.

BY THE SAME.

The very peculiar structure of the penis of the camel, and the minute size of the urethra render the operation of urethrotomy an exceedingly difficult, and even in some cases an impossible performance. This fact is illustrated by the following case:

A young camel, the property of the Central Park Menagerie, of this city, was found one afternoon suffering from difficulty of micturition. He seemed to be affected with slight colicky pains, and would, while standing, stretch his hind legs backward and apart, in making efforts to urinate, but without effecting any change in the position of the end of the penis from its ordinary position. The contractions of the accelerator urinæ could be felt through the skin of the sheath, though the bladder was not, apparently, greatly distended, and there was no appearance of vesical calculus, as was ascertained by rectal examination. Tinctor of opium was administered to relieve him from his colicky pains, and for a few days they seemed to be quite overcome, though he still occasionally assumed the position before described, but without passing any urine.

Having already met with two similar cases, and having failed of success in an attempt to introduce a catheter of the smallest size, but little hope of relief could be expected unless the urethral canal could be opened.

The animal continuing in the same condition for several days, it was decided to attempt the operation of urethrotomy, in the standing position, if possible, or by the exploration of the urethra in keeping the animal down.

The operation having become imperative, he was brought to the hospital of the college and subjected to the knife. After injecting twenty drops of a solution of cocaine in the perineum, over the tract of the urethra, an incision was made on the median

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line, and dissection made to expose the urethral canal. The deep situation of the penis between the two ischiatic tuberosities, with the powerful struggles of the animal and his unwillingness to maintain the standing position, rendered the operation impossible, and the division of the urethra at that point was necessarily abandoned.

Taking advantage of the recumbent position assumed by the animal, and in which he was kept with much difficulty, the legs were then secured by ropes, and an attempt made to find the urethral opening at the end of the penis. To effect this the sheaths and prepuce were divided on the lower border, and on the median line, and with great difficulty, the end of the penis was exposed. The organ at this point has a very small protrusion of mucous membrane, and on this the urethral opening was vainly looked for. The afternoon being advanced, and the light beginning to fail in consequence of a sudden change in the weather, a small portion of the organ, about an inch, was amputated, with the hope that the urethra might thus be found. Careful examination, however, failed to discover it, and it became necessary to leave the animal to nature and the chance of his mortally-critical condition. The parts having been washed and antiseptically sewed and dressed, the attempt thus ended.

The animal did not seem to experience much suffering from the operation. His temperature remained about 102° ; his appetite failed somewhat; he drank but little; but rumination had entirely ceased. For the purpose of giving him some relief from his stretching condition, the bladder was emptied by aspiration through the rectum, but of course with only temporary relief. On the second day after the operation the poor camel died.

At the post-mortem, extensive peritonitis was found, with a large quantity of fluid in the abdominal cavity, and the strong urinous smell of this fluid directed attention to the bladder, which was found ruptured. The kidneys were healthy, and the urethra, which scarcely admitted the introduction of a small silver probe from the ischiatic arch to its far end, had, at about eight inches from the end of the passage, a small calculus, scarcely the size of

a grain of corn, imbedded in the mucous membrane, which was at that point of a dark color, and undergoing mortification.

LARGE EPITHELIOMA OF THE PENIS.

BY THE SAME.

The importance of careful watching and of early operation in cases of cancerous growth of the penis is well illustrated by the history of the following case, which was presented to the clinic of the American Veterinary Hospital on the 29th of December, 1885:

The subject was a roan gelding, six years old, in a condition of apparently perfect general health, but suffering with epithelioma of the penis. About three months previous, a small wart had been observed upon the glands, which was cauterized with the apparent disappearance of any further cause of trouble. Recently, however, a very offensive discharge had made its appearance, bloody and purulent in character, and the scrotum became the seat a large swelling, which soon broke out at various points.

After some hesitancy on the part of the owner, who objected to the amputation of the member, which had been suggested by the veterinary attendant, the horse was at last ordered to the hospital for examination, and if deemed expedient, for treatment.

The animal was found on admission to be in the following horrid condition: Two enormous masses protruded through the opening of the sheath, that on the lower commissure measuring four and one-half inches in length, and one and one-half inches at its base, and hanging down, with a blunt end. The other mass, upon the upper commissure, was also very large, and somewhat spherical in aspect.

The animal having been prepared by cleansing and washing the parts with a carbolic disinfectant solution, was on the following day thrown down, in order to ascertain to what extent the diseased process existed, and to consider the propriety of surgical interference. On introducing the hand into the sheath, it came in contact with a large number of epithelial growths, varying in size, bleeding upon the slightest touch, and almost entirely closing

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the cavity of the sheath. The penis was retracted and entirely destroyed, there remaining but a very short stump of a granulating epithelial mass, which could not be drawn outside of the preputial cavity.

The owner being notified of the state of things, orders were given to have the patient destroyed.

At the post-mortem examination it was found that several abscesses had formed and ulcerated in the sheath, and that the skin was covered with masses of epithelial enlargements, of various sizes. The stump of the penis was the seat of a large irregular cauliflower growth, and was covered with bleeding epithelial granulations. It was destroyed to such an extent that it was impossible to pull it out of the cavity of the sheath. The extent of the disease, with the condition of the organ destroyed by the existing cancerous degeneration, obviously contraindicated a resort to amputation.

COMPLETE LACERATION OF THE GASTRO-ENEMII TENDON—
RECOVERY.

BY THE SAME.

On the 21st of November, a greyhound was brought to the hospital, with the following incomplete history.

While out hunting, the dog became suddenly very lame, and it was supposed that the injury had occurred to cause it when the animal jumped a barb wire fence. In doing this he had struck one of the barbs, which had made a small opening through the skin, and completely severed the tendon Achillis. As the animal walked, the lower portion of the leg was freely moving, no weight being carried on it, and a solution of continuity could be readily discovered. The separated ends of the tendon were about one inch apart, and the rupture was about an inch and a half from the apex of the os calcis.

The leg was immediately placed in splints, with the lower part well extended on the tibia, and allowed to remain in that condition until the 19th of November, when it was removed to ascertain how far the process of union had proceeded. It was found that both ends of the tendon were well united with a

strong band of cicatricial tissue, but which, though strong, was not yet sufficiently so to allow the limb to remain without artificial support. The splints were therefore again applied and allowed to remain for about two weeks longer.

As the bandage had occasioned some chafing of the skin at two or three points, these were dressed antiseptically until they were healed. On the 17th of December the whole apparatus was removed and the animal allowed to go home with a strong tendon.

The dog was quite lame when discharged, but this was supposed to be due to the atrophied condition of the muscles of the leg, and at the last report these were gradually returning to their normal size, and with this change the lameness is gradually disappearing. When last heard from the animal was entirely restored, and all that remained of his injury was a little thickening at the place of the lesion.

Careful examination of our veterinary literature seems to indicate that this is the first case recorded of so serious an accident being followed by such a radical recovery.

EXTRACTS FROM FOREIGN JOURNALS.

ENCEPHALOID CARCINOMA OF THE LIVER AND INTESTINES.

By MR. J. BURCK.

This mare, aged twelve years, had been repeatedly laid up on account of sickness. In less than two years she had been laid up five times, with attacks of varying duration.

Her sixth attack of sickness dated from the 7th of February to the 20th of April, 1885. She at first showed complete anorexia and general prostration. She had lost flesh considerably; the skin was dry and coat staring. There was no discharge at the nose or any gland. No trouble appeared either in the respiration or the circulation. The appetite was capricious and the digestion difficult; faeces normal. Rectal examination and urinary analysis revealed nothing. The mucous of the eye was of a manifestly icterous color. In action the animal was very weak. Auscultation and percussion showed nothing abnormal.

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No diagnosis was made of her case, and she was placed under observation with expectant treatment.

In a few days, she grew rapidly worse, and though her appetite had returned, through active tonic treatment, and her food was abundant and varied, she was afterwards sold and destroyed.

At the post-mortem the most remarkable lesion found was an increase in size and weight of the liver. This organ weighed ten kilograms (twenty pounds). It had lost its coloration and normal consistency. The surface was rough, bosselated in its whole extent, and covered with cancerous nodosities, of the encephaloid variety, varying in size. These tumors were round, whitish, soft and easily torn by the fingers. They occupied not only the surface, but the entire structure of the liver, in the form of infiltration. The tissue proper of the liver was atrophied and discolored. Along the course of the small intestine, in their first portion, on a level with the mesenteric glands, a glanglionic mass infiltrated with cancerous matter was observed, closing almost entirely the cavity of the intestines. The stomach, large colon, spleen, kidneys—in short, all the organs of the abdominal cavity, were exempt from any pathological lesions.

The microscopic examination of the tumor demonstrated it to be carcinomatous in character. —*Presse Veterinaire.*

ACTINOMYCOSIS.

By H. F. K. RICKELL, M.R.C.V.S., (Market Drayton Salop).

The case of actinomycosis recorded in a recent number of the *Veterinarian* reminds me of an identical case, to which I was called during the absence of my principal, Mr. Bampfield, Kettle Market, Drayton.

The subject of the disease was a red cow, three years old, the property of Mr. W. H. Joodall, of Stoke Grange, (the distinguished breeder of the Shropshire Down sheep.) On Wednesday, August 12th, I was requested to go and see the cow, which I was informed had been unwell for a fortnight, during which period she was unable to eat either hay or grass, but had been supplied with bran mashes and gruel. I may here add that she had be-

come very much emaciated. Upon examining the tongue, I found it exceedingly swollen, hot and tender to the touch, its dorsum being studded with nodules, varying in size from a three-penny piece to a shilling. As I had not the means necessary for treating the case by me, I arranged to go over the following morning, when I cast the animal, and proceeded to scrape the nodules, and immediately afterwards applied the iodised phenols, so strongly and successfully recommended by Prof. Walley, in his treatment of this disease. The local treatment was aided by the administration twice daily of iodide of potassium, combined with vegetable tonics. On visiting my patient on August 15th, I found that the scraping and the iodised phenol had effected a wonderful and satisfactory change, but knowing the intractability of the disease, I thought it advisable to again scrape the affected parts, and to repeat the iodised phenol, and from this time recovery proceeded rapidly.

On Wednesday, August 19th, I saw the cow for the last time. The tongue had nearly assumed its normal condition, and there was no longer any inability to prehend or masticate food. She was subsequently turned out, the following week, and I have since learned has done exceedingly well.

It will be observed in these few remarks on this case, that my treatment differed from that of Mr. Gresswell, by the substitution of scraping for scarification, which I venture to think is a very important divergence, inasmuch as the whole of the debris is at once removed, and the implicated surfaces fully exposed to the action of the medicant.—*From The Veterinarian.*

HYDROCHLORATE OF COCAINE—ITS USE IN OPERATING ON THE EYE FOR FILARIA OCULI.

By J. MILLS, M.R.C.V.S., A.V.D., (Madras.)

Having heard a great deal regarding the advantages of the use of cocaine in operation on the human eye, I decided on the first opportunity to give it a trial. Fortunately, a case was admitted into the Government Civil Veterinary Hospital under my charge, on the 2d of June, 1885. The patient was a large waler

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mare, extremely troublesome and nervous; in fact, it was with the utmost difficulty that anything like a good view of the eye could be obtained. I therefore cast her, when the parasite was clearly seen wriggling about in the aqueous humor. There was slight inflammation, with partial opacity of the lower portion of the cornea, involving nearly one-half of its surface, which was undoubtedly brought about by the case having been allowed to go too far before surgical aid was sought for, as the worm had been noticed in the eye fifteen days before the mare was brought to me.

This operation, although by no means new, has, I venture to think, never before been performed by the aid of this new local anaesthetic. Therefore I trust a short history of the operation and the drug will not be without interest.

I procured a solution containing one grain of cocaine in twenty-five minims of water, or of a strength of 4 per cent. The membrana nictitans was held back, and the solution painted over the surface of the cornea, conjunctiva and eye-lids, with a camel's hair brush. In about ten to twelve minutes complete anaesthesia had taken place, with considerable dilation of the pupil. I then made a small puncture with the point of a Macnamara cataract knife, well guarded with lint, at the upper portion of the cornea, through which the filaria escaped. In a little less than twenty minutes sensation returned to the eye. No inflammation followed the operation, and the case has done well from the first. The opacity is gradually disappearing, and patient will be discharged in a few days. I have found from considerable experience of these cases, that there is no instrument equal to the Macnamara knife.

This new local anaesthetic cannot but prove of the utmost value in veterinary practice, more especially in operations on the eye. It has only one drawback, and that is its high price. Previously, in operations of this kind, I always administered chloroform with the best results, and of course, although I have never had any accidents with chloroform on the horse, still the danger attending its use, compared with the cocaine, is great indeed. Therefore the latter must, for the future, act as a valuable and

safe substitute for chloroform in the production of local anesthesia.

DESCRIPTION OF THE DRUG.

The plant from which the alkaloid cocaine is obtained is known to botanists as *erythroxylon coca*, a member of the North Carolina linaceæ. It is a bushy shrub with numerous smooth leaves, which are lanceolate or somewhat oval in shape, and tapering towards the petiole. The flowers are small and of a yellowish color. The fruit is a little drupe, over one-fourth of an inch in length, ovoid in shape, quite plump and green, but furrowed longitudinally when dry. The coca plant is cultivated extensively in Peru, Bolivia, Colombia, and in some other parts of South America. It is said to thrive best in a moist, mild climate, at an elevation of 2,000 to 5,000 feet above the sea level. In this Presidency it is said to grow very well at sea-level on the coast, but its cultivation might be much easier and more profitable at higher altitudes. In some parts of South India a species somewhat resembling the American one, viz.: *erythroxylon monogynum*, is said to grow well, where it is known as devadaree, and adavi goranta. The therapeutic value of this shrub has not yet been determined.—*From the Veterinary Journal.*

NOTE.—Since writing the above the mare has been discharged from the hospital, with complete restoration of vision, and no opacity of the cornea, twenty-four days after the operation.

COMPOUND COMMUNICATED FRACTURE OF THE PHALANGEAL BONES IN A DOG TREATED SUCCESSFULLY BY AMPUTATION.

BY F. C. MAHON, M.R.C.V.S., Southsea.

I hope the accompanying history of a case of fracture implicating the digital bones, comprising a portion of the right phalanx of the dog, may be considered worthy of insertion in the *Veterinary Journal*. It was the first case of the kind I have actually had to personally treat, and it was very interesting to me.

The animal was a well-bred Manchester terrier, who on the afternoon of the 8th of August received injuries from a bite by a mastiff, resulting in a compound comminuted fracture of the

above-mentioned structures. The history of fractures implicating such bones as the radius and ulna of the fore limb, and femur of the posterior extremity, is well known, together with the causes so fertile in their production. This case is interesting from the successful results which followed amputation after all hope of saving the foot was gone, owing to the rapid necrotic changes which supervened. Primarily, the treatment adopted was in accordance with the recognized principles of modern surgery, viz., (1) reduction of the part, or bringing the displaced portions into their normal position; (2) maintaining them in such position until repair had been effected; (3) preventing or combating the local and general accidents.

Manipulation of the foot on the evening of the 8th of September revealed a compound comminuted fracture of all the digits, except the first, of the right foot, as well as the inferior portions of the metacarpal bones. There was much laceration of muscular structure, with several deep wounds communicating with the fractured bones, which comprised a number of pieces. Temperature registered 102.5° F., as taken per rectum; respirations hurried; rigors; profuse sweating, notably at the neck and flanks, with groaning—all indications of severe pain. The diet of the patient was attended to some hours following the preceding treatment, and was readily partaken of. Thirst considerable, and continued for several days, and was a notable feature of the case. As prostration was manifested on the 9th inst., stimulating tonics, as spts. ammon. con., tinct. gent. con., equal parts, were administered morning and evening.

On the morning of the 11th of September, notwithstanding the precaution adopted by disinfecting the parts, a discharge of a sero-sanguineous nature continued with much foetor, and, as was to be expected, œdema of the foot, which was now cold and denuded of hair. Examination revealed structural alterations of a necrotic nature, which had rapidly seized upon the digits particularly, and would shortly have affected the metacarpals. The terminal portions of the following structures more particularly were easily distinguishable, viz., ext. oblique of metacarpus, long abductor and short extensor of the thumb, and the common extensor

of the digits, with the sheaths of the various and numerously distributed nerves of the digits. The ordinary measures for amputation were resorted to, and as but slight connection now existed, removal was accomplished with but little pain to the patient. Slight hemorrhage, arterial, followed for a short while, presumably from the palmar, or collateral artery of the digits, which was soon arrested by pledgets of cotton-wool disinfected with liq. acid. carb., and the exposed ends of the bones scraped and covered with bandages. Temperature up to 16th inst. has ranged from 103° to 102°, at which it now stands. No very perceptible constitutional symptoms have developed since the operation; appetite continues good, and the sequelæ of surgical interference to be dreaded, such as surgical fever and septic infection, etc., appear to be in abeyance, the case bidding fair to have a very successful issue.

As we are not so solicitous for the canine host in such cases as in pedigree, shorthorn and other valuable breeds of cows, where the carpus and metacarpus are fractured and it is necessary to affix a wooden leg to the remaining portion of the limb—as witness the case reported by Driffied correspondent concerning the feat of Mr. Snarry, a veterinary surgeon on the Westow Grange farm, near York, where a valuable cow sustained damage to her leg, resulting in fracture—I am not aware that similar measures have been resorted to in the case of our canine patients, and would wish to be informed as to whether, in their treatment, means have been adopted of a like nature to the above.—*Veterinary Journal.*

RUPTURE OF THE DIAPHRAGM.

By J. Howe, pupil of Mr. Poyser, F. R. C. V. S. (Ashbourne.)

ON Thursday, October 1st, we were requested to attend a bay cart horse ten years old, the property of a baronet in this neighborhood. The animal, whilst standing in the farm-yard preparatory to the day's work, had been perceived to be uneasy, was returned to his stable, and his movements watched. Thinking it only an attack of colic, anti-spasmodic remedies at hand were

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administered, and the animal walked about; these failing to give relief, our attendance was desired.

On our arrival at 1 p.m. (four hours after the first symptoms of uneasiness had been perceived), we found the animal in a profuse perspiration, even the extremities were literally quite wet; pulse eighty, full and strong; respiration varied by paroxysms of pain; extremities alternately hot and cold. On inquiry we found pultaceous fæces had been passed, but the animal had discharged no urine since being unwell. Examination per rectum revealed nothing abnormal, the bladder containing but little urine.

Always declining on the same side, he would utter a most pitiful groan on reaching the floor, from which he would immediately spring on to his fore-legs, reminding one of the position which a cat or dog assumes when sitting upon their haunches.

This peculiar position seemed to afford the animal perceptible temporary relief, and he would turn his head towards his left side; when standing he would look to his right or off side. Our prognosis was unfavorable, as a rupture of some of the internal viscera was diagnosed.

From the symptoms, it was evident that our patient must eventually succumb; but in order to satisfy our client (who believes that while there is life there is hope) we adopted such remedial measures and treatment as we thought advisable. All, however, were, as anticipated, of no avail, the animal dying at 4 a.m. on Friday morning.

To me this case, so far an instructive and interesting one, had as yet its particulars to reveal.

The result of a post mortem examination next day was that the whole of the intestines were more or less in an inflamed condition, as was especially the peritoneal lining of the inferior abdominal parieties. The large intestine, and more especially the stomach, were very much distended with green food. On removing these it was at once seen that a rupture of the diaphragm had taken place, and that such rupture was ante mortem was evident by the greater intensity of diseased acti around it. The lesion was in the tendinous structure of the diaphragm, about five inches from the sternal attachment of its more muscular surroundings,

and was by measure in extent about six inches in an upward direction.

As to the cause of such a rupture it was thought that the horse, subsisting, as it did, mainly on green food, had eaten too freely, and in galloping down hill (the farm being a very hilly one) with its over-extended stomach, by a sudden check or plunge had caused the rupture.

The peculiar position before referred to assumed by the animal at frequent intervals, I believe, has been considered diagnosis of ruptured stomach; but I can understand its being far more symptomatic of lesions in the diaphragm, especially when we have an overcharged stomach or a hardened liver pressing upon this vitally important structure.

I believe that lesions of this important muscular septum are more frequent terminations of the lives of many horses than are supposed.

I hope my desire to trespass on the space of this valuable journal will be pardoned, but as veterinary literature on this subject is somewhat vague, I thought the case might prove as interesting (if not instructive) to some readers as it is to myself.—*From the Veterinary Journal.*

CORRESPONDENCE.

IMPERFECT VETERINARY EDUCATION—IS IT TRAFFIC IN VETERINARY DIPLOMAS?

It is a well known fact, even advertised in *The Spirit of the Times*, that junior students can enter a certain veterinary college at any time up to the 4th of January. During my career as a student at a provincial college, I observed that junior students were actually admitted as late as the 26th of January. Then, as at present, they advertised a special course or class for junior students, to begin early in January; though, in reality, there was no special course or class established for junior students, and there was only one course and class for junior students, which began at the beginning of the session or opening of the college, late in October or early in November.

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Fully nine-tenths of all students in the junior class left college during the first week of the month of March, and that too, without being required to undergo or pass any examination as junior students. Of course, a few, perhaps a dozen of the students in the junior class, remained and attended college until the close of the session, then passed a so-called junior examination, which entitled some students to receive small prizes, while others received only honorable mention in the annual announcement of the college. There was not ten per cent. of the junior class examined on any subject pertaining to their studies as junior veterinary students.

About three-fifths of the students in the junior class manage to attend college only a part of a session. Those "short cut" students usually return at the beginning of the next session, are not required to undergo or pass any examination, but are generously registered and entered as senior students, and fully ninety-five per cent. of them graduate and receive diplomas at the close of the session. There are some senior students who do not attempt to study or even pretend to know anything about veterinary science, and such students are occasionally compelled to attend a part of a third session, which costs twenty-five dollars; though in some cases those students do not attend any part of a third session, but merely pay their fee and then appear before the Board of Examiners, which usually meets during the latter part of the month of December.

Take into consideration the fact that there is neither spring or summer session, and it is evident that attendance at the lectures in a veterinary college for a period of five or six weeks must necessarily constitute a very brief experience as a junior student. Such liberality might be considered "worthy of a better course," if they did not always charge a full fee as if the junior student attended a whole session, instead of only a part or fraction of a session. There is no matriculation examination of any kind, and the only requirements and qualifications necessary for admission is the ability to pay the college fees, which are very moderate indeed.

A fee of ten dollars is invariably charged for the diploma,

although such is not mentioned in the annual announcement of the college. Clinical instruction is entirely ignored, and is not a part of the curriculum.

When a student enquires concerning the ailment of a patient in the college infirmary, "one of the assistants" will impolitely inform him that it is "a very severe case of sailor's gripes or gorman rattles." It is needless to mention that one session was sufficient to gratify their ambition to study in the said veterinary college.

Is it any wonder that some of the State veterinary medical associations do not hesitate to admit quacks and charlatans into membership in their respective associations, and even grant them certificates of membership as veterinary surgeons?

The majority of the regular graduates composing the body of the Ohio State Veterinary Medical Association are graduates of the same veterinary institution. Therefore the purport of that circular or letter, which Prof. Liautard received from them, and which was subsequently published in the *AMERICAN VETERINARY REVIEW*, was evidently intended as a mild rebuke to the "short cut" method of instruction as taught and practised in that veterinary college. However, there was no urgent necessity to offer it as an unpardonable insult to the other veterinary schools and colleges in the United States and Canada.

It must be distinctly understood that this article was not written for the purpose of inciting any personal discussion, but merely to expose some practices which are inimical to the interests and welfare of veterinary science.

Very respectfully,

JAMES A. WAUGH, V.S., (Ont.)

Regt. Vet. Surg. Sixth Cav., U.S.A.

VETERINARY MEDICAL LEGISLATION.

Editor American Veterinary Review:

I send you for publication a copy of the proposed bill to regulate veterinary medicine and surgery in the State of New York. It is, as you will see, far more liberal than that advocated

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last year ; which unfortunately contained a clause that naturally antagonized the self-made men of the profession.

If there is any fault with the bill, it can only possibly be its liberality ; yet, that is so tempered with justice, that no fair minded person can raise his voice against it. And it is on this account that I feel constrained to say a few words to the regular members of the profession, through the *REVIEW* ; knowing as I do, that whatever opposition the bill will receive, will be from graduates of veterinary medicine practicing in the State of New York ; and I regret to say, that already I have been given to understand that there is at this early stage, that very opposition. Why is it, if not from some personal motive. Is it because perchance, it will give a standing to some non-graduate of the profession, whom we should be obliged to recognize ; but even if from that point objection is taken, it should not be forgotten that this recognition is simply professional and not necessarily social ; or if it should be with an idea to lessen the number of practitioners, defeating the bill will not have the effect ; so it would appear that whatever opposition is offered, will be purely from a selfish standpoint, and consequently from no veterinarian who has the welfare of his profession at heart. There is too much of the spirit of "the public be darned"—substituting the word profession for public. Among the veterinarians of the present day, there would seem to be just two ideas that enter the minds of those taking up the veterinary profession for a calling—diplomas, dollars—the first to swear by, the second to worship ; but I am glad to admit, as is the case in all rules, there are exceptions, but I think you will agree with me, when I say, they are few and far between, and that there appear to be an entire lack of ambition on the part of nine-tenths of the members of the profession. But I am diverting.

My object now is to try and get a unity of action on the question of legislation.

The veterinarians of the northern part of the State, (Rochester,) have had introduced into the Assembly a bill to regulate the practice of veterinary medicine ; so that there are now two bills before that body, for their consideration. I cannot see the

need of introducing two bills. Do the Rochester division think for one moment that New York City and its vicinity are trying to legislate for its own local good? if so, they were never so mistaken or did a greater injustice.

The New York State Veterinary Society simply wishes for legislation for the elevation and good of the profession, and for that alone. It is a body perfectly independent of any particular college or school, its members being composed of graduates of no less than six different schools. It has acted with the greatest liberality, making concessions right and left; and every veterinarian, be he member of that body or not, who will act in union with the society, on this one all-important question, will be working for the elevation of his profession, and consequently of himself, and not for any particular few or school. Every member of the profession, be he graduate or not, has more or less influence and can easily help in the good work, by seeing or writing their respective members of Assembly and Senate, if they approve the bill. If they do not, I trust they will be men enough to state their objections. I feel sure that by a united action, we shall be able to get the profession legalized, and if we should fail in reaching that grand point, by reason of fighting among ourselves, it will be an everlasting shame and disgrace. I will see that every member of the Senate and Assembly gets a copy of Dr. R. W. Finlay's able paper on veterinary medical legislation, and shall be pleased to put myself in communication with any member of the profession regarding this question,

Yours very truly, W. H. PENDRY, D.V.S.

VETERINARY LEGISLATION.

AN ACT TO REGULATE THE PRACTICE OF VETERINARY MEDICINE AND SURGERY IN THE STATE OF NEW YORK.

The People of the State of New York, represented in Senate and Assembly, do enact as follows:

SECTION I.—No person shall practice veterinary medicine and surgery, or any branch thereof, in this State for compensation, or shall either directly or indirectly receive or accept for his services

as a practitioner of veterinary medicine or surgery any fee or reward, except he be duly registered, as hereinafter provided, in the book for that purpose in the office of the Clerk of the county in which he resides.

§ II.—No person shall be entitled to register as such practitioner unless he be a graduate of a legally chartered or incorporated college or university, or shall hold a certificate of qualification from a legally incorporated veterinary society, organized at least one year before the passage of this Act, and such certificate shall be issued at least one year previous to January 1, 1886, except as provided for in Section III of this Act.

§ III.—Any person who has been continuously practicing veterinary medicine and surgery in this State as a means of livelihood for a period of not less than five years immediately preceding the passage of this Act, without having obtained a diploma or certificate from a legally chartered or incorporated Veterinary College, University or Society, as provided for in Section II of this Act, must register within six months after the passage of this Act, upon making and filing with the Clerk of the county in which he resides an affidavit stating that he has been so continuously practicing veterinary medicine and surgery for the period hereinbefore prescribed.

§ IV.—The County Clerk of each county shall provide a book, to be known as the "Veterinary Medical Register," in which shall be recorded the name of the registrant, the name of the college or university granting his diploma, or of the society granting his certificate; or should the applicant not present such diploma or certificate, then the Clerk shall file the affidavit prescribed in Section III of this Act, after which such applicant must register in like manner as if he had presented a diploma or certificate from a veterinary college, university or society, and shall then be entitled to continue the practice of veterinary medicine and surgery. Every applicant who shall have complied with the foregoing provisions, and shall be admitted to registration, shall pay to the Clerk of said county the sum of two dollars, which shall be received as full compensation for such registration.

§ V.—Any person who shall present to the Clerk for the purpose of registration any diploma or certificate which has been fraudulently obtained, or shall practice veterinary medicine and surgery without conforming to the requirements of this Act, or shall otherwise violate or neglect to comply with any of the provisions of this Act, shall be guilty of a misdemeanor, and shall for each and every offence be punished by a fine of not less than fifty dollars, nor more than two hundred and fifty dollars, or by imprisonment in the county jail for a term of not less than ninety days, nor more than two years, or by both fine and imprisonment.

§ VI.—This Act shall take effect immediately.

AN ACT TO REGULATE THE PRACTICE OF VETERINARY MEDICINE AND SURGERY
IN THE STATE OF NEW YORK.

*The People of the State of New York, represented in Senate and
Assembly, do enact as follows:*

SECTION I.—The Regents of the University of the State of New York shall appoint one or more Boards of Examiners in Veterinary Medicine and Surgery; each board to consist of five members, who shall have been duly authorized to practice the same in the State.

§ II.—Such examiners shall faithfully examine all candidates referred to them for that purpose by the Chancellor of said university, and furnish him with a detailed report in writing of all the questions and answers of such examinations, together with a separate written opinion of each examiner as to the requirements and merits of the candidate in each case.

§ III.—Such examinations shall be in anatomy, physiology, pathology, chemistry, *materia medica*, therapeutics, practice of medicine and surgery, and obstetrics.

§ IV.—The said report of examiners shall, with their answered opinion be forever a part of the public records of said university, and the order of the Chancellor addressed to the examiners, together with the action of the Regents in each case, shall accompany the same.

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§ V.—Any person over twenty-one years of age, and paying thirty dollars into the treasury of the university, and on applying to the Chancellor for said examination, shall receive an order to that effect, addressed to one of the board of said examiners, provided that he shall adduce satisfactory proof to the Chancellor that he has a competent knowledge of the branches of learning taught in the common schools of this State. No person shall be eligible to an examination of the examiners appointed in pursuance with the foregoing provisions, for a doctorate degree in veterinary medicine who has not practiced at least seven years.

§ VI.—The Regents on receiving the aforesaid reports of the examiners, and on finding that not less than three members of a board have voted in favor of a candidate, shall issue to him a diploma, and in case an examination has been made with the view of conferring a doctorate degree and the applicant is found worthy, a diploma shall be issued to him conferring the degree of Doctor of Veterinary Medicine of the State of New York. Either of said diplomas shall be a license to practice veterinary medicine and surgery. The candidate on receiving either of said diplomas, shall pay the further sum of twenty dollars.

§ VII.—The Regents may establish such rules and regulations, from time to time, as they may deem necessary, and the moneys paid to the university as aforesaid shall be appropriated by them for the expenses of executing the foregoing provisions of this Act.

§ VIII.—It shall be unlawful for any person to practice veterinary medicine and surgery in this State, unless he is a resident and holds a diploma conferred by an incorporated veterinary school, college, or university, or of a certificate of qualification from some legally incorporated veterinary society, provided that nothing in this section shall be construed to apply to any person who is now and has been engaged in the actual and continued practice of veterinary medicine and surgery for at least seven years in this State. A person not a resident of the State, and coming into it after the passage of this Act, may be licensed to practice veterinary medicine and surgery in the following manner: If he has a diploma authorizing him to

practice veterinary medicine and surgery, conferred upon him by some legally incorporated veterinary body outside of the State, he shall exhibit the same to the aforesaid examining board, with satisfactory evidence of his good moral character, and such evidence of his qualification as said examining board may require. If his diploma and qualification are approved by them, then they shall endorse said diploma, which shall constitute it a license to practice in this State, the same as if issued by them. The applicant shall pay into the treasury of the university the sum of thirty dollars previous to receiving an order for said examination. The same shall be forfeited in case the applicant fails to obtain the endorsement of said board. Any person holding a diploma (conferred by an incorporated veterinary school, college, or university of the State, recognized as proper authority by the Chancellor of the university of the State,) through a non-resident, shall be permitted to come into the State, and make it his residence, and is authorized to practice the same as a resident practitioner at the time of the passage of this Act.

§ IX.—Every person now engaged in the practice of veterinary medicine and surgery, and qualified as required by section 8 of this Act, shall within sixty days after its passage register, and every person hereafter duly authorized to practice, shall before commencing, register in the Clerk's office of the county in which he intends to practice veterinary medicine and surgery, in a book to be kept by said Clerk, his name, age, residence and place of berth, together with his authority for so practicing. The person so registering shall subscribe and verify by oath or affirmation before a person duly authorized to administer the same under the laws of the State, an affidavit containing such facts. If diploma or certificate, the date of same and by whom granted, which, if willfully false in any particular, shall subject the applicant to the pain and penalties of perjury. The fee for registration to be paid by the person registering.

§ X.—Any person neglecting to comply with or violating the regulations of section 8 and 9 of this Act, shall be deemed guilty of misdemeanor, and upon conviction shall be fined not less than twenty-five or more than one hundred dollars, or imprisonment

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for not less than twenty or more than sixty days for each offence. Any person shall be regarded as practicing veterinary medicine and surgery within the meaning of this Act, who publicly proposes to prescribe for, or treat, the ailments of domestic animals. But nothing in it shall be construed to prohibit students from prescribing under the supervision of preceptors, or to prohibit gratuitous services in cases of emergency, or to prohibit the services of an authorized practitioner of a neighboring State when incidentally called into requisition. Neither shall an unauthorized practitioner be liable to the penalties of this Act until after an examining board has been organized in pursuance of the same to examine applicants, of which proper notice shall have been given, provided that within sixty days after its passage he has applied to the Chancellor for an examination, and paid the sum required therefor into the treasury of the University, and is diligently seeking an opportunity for the same.

§ XI.—No certificate issued by any society after the passage of this Act shall be valid authority to practice veterinary medicine and surgery, or entitle the holder thereof to register for such purposes.

§ XII.—All Acts or parts of Acts inconsistent with the provisions of this Act, are hereby repealed.

§ XIII.—This Act shall take effect immediately.

SOCIETY MEETINGS.

NEW YORK STATE VETERINARY SOCIETY.

The regular monthly meeting of the New York State Veterinary Society was held on Wednesday, January 13, at the Cooper Institute, New York, the President in the chair.

Members present were Drs. Bretherton, R. W. Finlay, L. McLean, Boyd, Cuff, Charum, R. A. Finlay, Denslow, W. H. Jackson, R. McLean, Newman, Pendry, Faust and R. Ogle.

Minutes of last meeting were read and on motion adopted.

Letters were read from Drs. C. C. and Jas. S. Cattanach, New York; O. C. Jackson, Jamacia; and Cohen, Amsterdam; stating they could not be present, and advocating the passage of the proposed bill as printed; also from J. Lindsay,

Huntington, L. I., and A. S. Cook, Binghamton, to the same effect, but favoring an examination clause in the bill for non-graduates.

The President stated that the question of legislation was the main point to be decided upon; not so much as to whether or not we should get a bill passed, but whether the one as printed, and sent to each member, should be adopted by the society. He should like to have an expression from those present.

Dr. R. A. Finlay remarked that, at the last meeting it was decided to send to each member a copy of the drafted bill, asking for an expression on the same, if they could not be present: what had been the result? He questioned whether there were sufficient members present to take the responsibility. He favored the question being dropped.

Dr. R. Ogle thought that by all means we should proceed with the consideration of the bill. Although there were only a few present, he considered that few were well able to transact business. Drs. Bretherton and Boyd saw no reason why it could not be passed in its present form.

Dr. Faust was in favor of having an examination for non-graduates, who should not be allowed to practise if they could not pass a satisfactory one, and pay a fee for a certificate equal to that paid for a diploma.

Dr. L. McLean said while it was true that the members present were few yet they were there as a society, and they were a quorum. We could not but deplore the apathy of those members absent; we could not expect to have things all our own road; we see to-night men who have prominence making themselves conspicuous by their absence. He approved the bill; it was one that should pass, and would, he thought, meet the present requirements; it was certainly a very liberal bill, and irrespective of the cold shoulder given it by members, from whom we should have expected better things, he would advocate the few fighting for its passage.

Dr. Charum considered that the peculiar position of the profession obliged us to be very liberal, but in view of the want of interest shown, he would suggest that the bill be laid on the table.

Drs. Cuff, Jackson and Newman favored fighting for the bill as it now stood, so did Dr. Denslow, only he objected to the amount of punishment as laid down in the fifth section.

Dr. R. W. Finlay spoke of the attempt last year to get a bill passed, going considerably into the work done then; now, he said, another one had been adopted, one that was much more liberal, yet he questioned whether that could be passed without the aid of money; and again, the members of the society had each been sent a copy of the proposed bill, with a printed circular, asking them to be present, or send their views regarding the matter. What was the result? Out of over sixty members of the profession, we had fourteen present, and only six had thought it worth their while to answer the Secretary's letter. Forty would only have been a reasonable number to have expected to be present. It certainly indicated that many wished to have nothing to do with the bill; and he did not consider it fair to saddle the work of getting a bill passed on the few, for the whole to get the benefit, and so he had to withdraw all his favors for it.

Dr. L. McLean replied that the fourteen present evidently indicated that they wished to legislate; if we were to stop because there was only that number present, then we had better drop the society.

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Dr. R. A. Finlay questioned whether those few were willing to father the expense.

Dr. Pendry said section two of article five provided for that, inasmuch as it gave the power to assess such expenses as had been incurred by the society.

Dr. R. Ogle was sure no money would have to be spent to have the bill passed. He had already been promised the support of members of the Legislature.

Dr. Pendry being called upon to express his views on the subject, said that he considered some of the members had got hold of a wrong idea, in considering that money was necessary to pass such a bill as the one proposed. Dr. Finlay had stated, that when at Albany, in the interest of the last bill, he had been asked what was behind it, or in other words, was there any money in it. He was not surprised to hear that such a question had been put, although no such question had been asked him when he visited Albany, as Secretary of the society, in the interest of their then proposed bill. It was true the bill did not pass; but why? because his pleading to have the examining clause struck out, was ineffective. A bill with such a clause inserted, demanding that a fee equal to that paid for a diploma, bore upon its face—however unintentional it might have been—a money making job for some three members of the profession, who would have formed the Examining Board. A Western paper even went so far as to place the amount of such fees at ten thousand dollars; this he considered was the reason of the question of money being raised. He had the pledge of more than one member of the Assembly, and one had offered to father the bill. The present bill was so liberal, was so void of any individual benefit, that there could not possibly be any opposition. It was not because money had not been put up, that the last bill was killed, but simply because a country non-graduate had so strongly and easily shown the committee before which the bill was, that it possibly placed it within the means of three men to take the bread out of his mouth, so the opposition was strong and forcible. We should not advocate the bill as individuals, but as a body of professional men advocating a cause for the good of their profession. Veterinarians would not receive any individual benefit, but would succeed in raising their profession to the high position where it justly belongs, and not let it any longer lay in the unlegalized gutter-like position that it now occupies. That we should not go ahead because there were so few present, was he thought a poor argument. Were we going to let those who did not consider it worth their while to come, see that we could not get along without them. Such an idea he considered childish; it was simply the old, old story over again, that the few had always to do the work, and the many receive the benefit. It had always been so, and would always remain so, and he for one was willing to yet remain one of those few.

Several members spoke of members of the Legislature who had promised the bill their support.

The President said there could not be any opposition to the bill. He was in favor of it. The bill was a very liberal one, yet not more so than the one passed by practitioners of human medicine. The country practitioner could not be antagonized; he was doing his best, and could control more votes than a city practitioner. He had had no opportunity to educate himself. This bill was lifting such men from the gutter. He did not think the bill would be defeated.

There could be only one class who would help to defeat such a bill, and it would be those who made money by teaching.

Dr. R. W. Finlay admitted that the bill was very simple and honest, but what struck him was the small representation of the profession. The very men who created the bill had withdrawn their support by their absence. He however did not think it would cost less than five hundred or a thousand dollars to pass it.

After some further discussion, it was moved by Dr. Pendry, seconded by Dr. R. Ogle, that the bill, as drawn up and printed, be approved by this Society, and that the same be placed in the hands of a committee, with instructions to have the same presented at Albany. The motion was carried, and Drs. Pendry, R. Ogle and Faust were named as a committee to look after the bill.

Dr. R. W. Finlay said it would be as well to interest each member to exert himself with those members of the Legislature that he could reach, and use whatever influence they could. The suggestion was acted on by the Chair.

Dr. Pendry thought that Dr. Finlay's able paper on Veterinary Medical Legislation should be printed, so that a copy could be sent to each member of the Legislature. The idea was approved, and Dr. R. W. Finlay moved that the Committee on Bill be given power to aid the passage of the bill in whatever way they may deem best, and to incur any reasonable expense, which was seconded and carried.

Dr. L. McLean, delegate to the Cattle Growers' Convention at Chicago, reported verbally, that he had attended the convention as a delegate from the Society, and was admitted on the credentials supplied by the Secretary. There were matters discussed from a professional standpoint, and those who were largely interested in cattle took a lively interest in the proceedings of the veterinarians, among whom there was a perfect union as to the matter of contagious diseases. He thought other meetings would be held, and much good would no doubt follow. On motion, the report was received, and a vote of thanks tendered for the same.

Dr. Pendry moved that the Society give their annual prize of a gold medal for the best practical examination passed by a veterinary student graduating this spring, and that the Examining Committee be named by the Chair. Dr. R. W. Finlay seconded the motion, which was carried.

A bill was read from Dr. L. McLean of \$74.00, being his expenses to the Chicago Convention. After some remarks as to Dr. McLean's former objection to the expenses of a delegate being paid, it was ordered received.

The Secretary reported that Drs. Allen, J. Leighton, M. Bunker, W. H. Arrowsmith, W. Critcherson, W. McCaldon, T. Outerbridge, T. Finnegan, F. J. Hanshew, F. Saunders, R. Simmons, J. H. McMartin and G. Nostrand had been struck from the roll for non-payment of initiation fees and dues.

Dr. Pendry gave notice of alteration of By-Laws, as follows:

That Section 2 of Article I be made to read, "Annual December meeting," instead of "March meeting."

That there be added to Section 1 of Article IV, "And be a resident of the State at the time of his election to membership."

To follow Section 2 of same Article: "Section 3, The Secretary shall not enter the name of any newly elected member on the roll book until the Treas-

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urer's receipt for the initiation fee and the current year's dues has been obtained."

That the words "one dollar," in Section 1 of Article V, be stricken out, and in its place the words, "two dollars" be inserted.

After Dr. Lamb, of Poughkeepsie, had been appointed essayist for the next meeting, a vote to adjourn was carried.

W. H. PENDRY, D.V.S., *Secretary.*

NEWS AND SUNDRIES.

VIVISECTION NOT ALLOWED.—Mr. John Jay Knox, President of the Anti-Vivisection Society, New York, sends the following letter to the press for publication: "I desire to call your attention, and the attention of all human brutes of the Pasteur school, who propose torturing rabbits by the thousand, to the anti-vivisection laws of this State and New Jersey. Dr. Billings proposes to kill 5,000 rabbits by slow fever. If he kills even one in this State or New Jersey, he will be prosecuted and punished to the full extent of the law by this society."

CONTAGIOUS PLEURO-PNEUMONIA.—The January number of the *National Live Stock Journal* gives an account of the slaughter of a dairy herd, near Gravesend, England, that were infected with pleuro-pneumonia. They were killed at the instance of the local authority of Kent. Thirty cattle apparently healthy, were slaughtered to "clear out" the dairy; about as many more having been slaughtered—one, two or more at a time—at irregular intervals, but only such animals as were visibly suffering from the disease. Out of the thirty animals that appeared in sound health, but which had been in contact with former diseased animals of the herd, twelve showed on post mortem examination, characteristic signs of pleuro-pneumonia, from incipient to more advanced stages of the disease. All these cattle were capable of propagating infection. They would inevitably very soon have showed marked symptoms of the disease.

The weekly edition of the same journal, January 5, 1886, in commenting on the above facts, adds: "that this case affords

very strong argument in favor of the immediate slaughter of all the animals in an infected herd that have been exposed, as well as of those visibly affected. It is evidence of the usual results of half measures, resulting merely in postponing the inevitable, after a useless and costly delay, which could have been avoided. This case also furnishes abundant proof of that which has been so often contended, and in this country confidently denied, namely, that animals may be infected with this disease and liable to communicate it to others, and yet show no outward signs of being affected by it, and even eventually recover from it themselves. The discovery by post-mortem of twelve diseased animals out of thirty apparently unaffected, should afford convincing proof to the most skeptical of this dangerous feature of contagious pleuro-pneumonia."

PRIORITY IN INOCULATIONS AGAINST RABIES.—The last thing thought of would be that a claim of priority would be put in against Pasteur's preventive inoculations against hydrophobia. We learn, however, from *Le Progres Medical*, that in a medical journal called *Klinische Anweisungen*, appearing in Leipsic in 1849, under the title of "Rabies and Poisoning," an article is published discussing a method of preventing rabies by vaccination. The doctor employing this measure called himself Constantine Hering, and lived in Philadelphia.—*Medical Record*.

ENDURANCE OF ARAB HORSES.—The oft-quoted endurance of Arab horses has received recent confirmation of the strongest kind. The officer commanding the Nineteenth Hussars, in the unfortunate campaign for the relief of Khartoum, has published some interesting memoranda in regard to these animals, which were the mounts of his regiment during that expedition. These were Arab stallions, about eight or nine years of age. Out of 350 horses, only 12 died of disease during a hard campaign of nine months. For four months of the time the weather was very trying, food was limited, and during the desert march water was very scarce. On the final march made by the troops, 155 of these horses were fifty-five hours without a drop of water and

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only one pound of grain. Some of them had no water for seventy hours ; yet, at the end of the campaign, after a week's rest, says their eulogist, the animals were handed over to another regiment in as good order as they had been when first secured, nine months before.—*National Live Stock Journal.*

EXCHANGES, ETC., RECEIVED.

Besides our usual exchanges at home and from abroad, and a large number of newspapers received, we beg to announce the following :

CORRESPONDENCE RECEIVED.—J. C. Myers, Sr., V.S.; J. Scheibler, D.V.S.; D. Dixon, D.V.S.; J. A. Waugh, V.S.; W. H. Pendry, D.V.S.; J. D. Hopkins, D.V.S.; E. R. Forbes, M.R.C.V.S.; M. J. Tracy, M.R.C.V.S.; A. Tuttle, D.V.S.; L. Mercier; A. Roux, V.M.; W. Bryden, V.S., A. Peters, D.V.S.; J. P. Wilson, D.V.S.; C. C. McLean, V.S.; G. S. Agersborg, D.V.S.; J. Gerth, Jr., D.V.S.; W. C. Fair, V.S.; W. L. Zuill, D.V.S.

The Journal of Comparative Medicine and Surgery.

This well-known quarterly now enters upon the seventh year of its existence. It is especially devoted to Comparative Medicine, and is of as much interest to veterinarians as to physicians. The January number will contain the following original articles :

The Comparative Anatomy of the Pyramidal Tract, by E. C. Spitzka, M.D.

History of Tuberculosis, by F. S. Billings, V.S.

An Exhaustive Treatise on Milk, by Thos. Balfe Rogers, D.V.S., Veterinary Inspector of New Jersey.

An Article on Azoturia, by Richard W. Burke, M.R.C.V.S., Army Veterinary Department, India.

Also a Biographical Notice, with portrait, of George Fleming, M.R.C.V.S.

The April number will contain an original article on "Differential Diagnosis in Glanders" (published for the first time), by Prof. Schultz; translations of articles by Professors Growitz and Dieckerhoff on "A New Acute Disease in the Horse," and by Professor Degive on "Pleuro-Pneumonia; also an article on "Osteo Porosis," by H. F. James, V.S.

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